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What is claimed is:

1. An ink-jet image forming method comprising:

jetting ultraviolet ray-curable ink from an ink-jet head onto a recording substrate while conveying the recording substrate; and

exposing the jetted ink on the recording substrate to ultraviolet rays irradiated by an ultraviolet ray-emitting light source,

wherein in the exposing step, a surface temperature of the ultraviolet ray-emitting light source is not more than 60 °C.

- 2. The ink-jet image forming method of claim 1, wherein the ink-jet head is a line-shape ink-jet head installed in a perpendicular direction to a conveying direction of the recording substrate, and the ultraviolet ray-emitting light source is a ultraviolet ray-emitting tube, which is longer than the line-shape ink-jet head, and is fixed at a downstream position of the ink-jet head and in the perpendicular direction of the conveying direction of the recording substrate.
- 3. The ink-jet image forming method of claim 1, wherein the ultraviolet ray-curable ink is jetted onto the recording substrate while the ink-jet head being moved by a carriage in

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a perpendicular direction of the conveying direction of the recording substrate, and the ultraviolet ray-emitting light source is installed on the carriage.

- 4. The image forming method of claim 1, wherein the distance between a surface of the ultraviolet ray-emitting light source and the recording substrate is from 0.1 mm to 100 mm.
- 5. The image forming method of claim 1, wherein the exposing step is started in at most 1 second after an arrival of the jetted ultraviolet ray-curable ink to the recording substrate.
- 6. The image forming method of claim 5, wherein the exposing step is started in 0.0005 to 1 second after the arrival of the jetted ultraviolet ray-curable ink to the recording substrate.
- 7. The image forming method of claim 1, wherein the ultraviolet ray-emitting light source is a fluorescent light source comprising a fluorescent material.
- 8. The image forming method of claim 1, wherein plural ultraviolet ray-emitting light sources, which have different peak wavelengths from each other, are used in the exposing step.

9. The image forming method of claim 1, wherein the ultraviolet ray-curable ink comprises a cationic polymerization initiator and a cationic polymerizable monomer.